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ABSTRACT

A case study is described in which an application of Goodman's Psycholinguistic Guessing Game model of reading was attempted with an elderly illiterate woman. Instructional materials were devised consistent with the theory of the game, and a tutorial was conducted. Researcher observations were recorded with respect to the subject's session-to-session progress in reading acquisition and effects upon the learner herself. Formal testing and third-party observation corroborated the success of the instructional process. (Author)

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BREAKING THROUGH THE DECODING BARRIER:

A CASE STUDY IN ADULT LITERACY

by

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Breaking Through the Decoding Barrier:

A Case Study in Adult Literacy

In the Educational Gerontology special issue on reading (1979), Gentile and McMillan (1979:215-220) described a model reading program for the elderly through which renewal--intellectual, physical or spiritual--could be experienced by participants in the program.

The same issue ended with an inspiring essay by Lumsden (1979) in which he decried the existence of illiteracy in the United States, and in which he called for a national effort to eradicate illiteracy similar to that attempted in Cuba in 1961. He complained that he had never seen reading materials that "(1) have been specifically designed to teach illiterate older adults to read, (2) teach reading using content that research indicates corresponds to the actual needs and interests of the elderly, and (3) have been empirically validated insofar as their effectiveness is concerned."

This article reports on an extended case study which addresses the concerns of Lumsden as well as the renewal goals of Gentile and McMillan.

Background of the Study

Approximately one year prior to the drafting of this article, the writer was presented with an interesting problem and a compelling challenge. He was approached--accidentally[1]--by a woman who sought help for her mother, an illiterate. The woman was directed to the writer who suggested

that she inquire into the established literacy programs in the area. The woman responded that such inquiries had been made but there were several misunderstandings related largely to the fact that her mother was not a native speaker of English, and that officials of the program usually, and in a well-meaning fashion, directed the older woman to classes of English as a second language (ESL). Neither the daughter nor the mother thought that ESL was an appropriate program since her mother was quite fluent in spoken English; her problem, the daughter insisted, was that she could not read.

Having had a life-long professional interest in both ESL and reading, the writer agreed to meet with the older woman (henceforth called Mrs. G.) and, perhaps, help direct her to an appropriate person--one who would see that she was enrolled in a pertinent program of instruction of ESL or reading. Upon meeting and talking with the woman, the writer learned that, indeed, her English was fluent and lightly accented, indicating no need whatsoever for specific instruction in English as a second language.

It was then that the writer offered to undertake an assessment of Mrs. G.'s reading problems, and design, if deemed necessary, a tutorial reading program for her. The writer asked permission of Mrs. G. and her daughter to use the experience as a research project following a case-study approach, and to present his observations to other interested professionals via relevant media. The anonymity of the subject was to be protected, of course, and an agreement was signed to that effect by the researcher and Mrs. G.'s daughter acting on behalf of her mother.

Description of the Subject[2]

Mrs. G. was born fifty-seven years ago in a rural area of one of the Slavic countries of eastern Europe. She received no schooling at all during

her childhood. She did not explain why this was so and there was no attempt made to press for this information.

In her teens, she and her family were taken by the Nazis and transported to work camps. Ultimately, Mrs. G. was separated from the rest of her family and, as the war progressed, she was moved to several different work camps. At war's end, Mrs. G.'s camp was liberated by the Allies and she and her fellow inmates were declared Displaced Persons governed by an American military administration.

She spent the post-war years in U.S. sponsored refugee camps where, after a time, she married. In 1949, she and her husband, under the sponsorship of the Roman Catholic Church, were granted visas to come to the United States. They settled in Lincoln, Nebraska, and proceeded to obtain U.S. citizenship.

Both Mr. and Mrs. G. learned spoken English; he, literate in his native language learned also to read English. They had four children, three of who are now married and live away from Lincoln, while one, a university graduate, lives in the area. Both Mr. and Mrs. G. worked as laborers (she still does).

Mr. G. died about three years ago. His death left Mrs. G. quite dependent upon her one daughter for handling many of the day-to-day affairs which require basic literacy and which were previously taken care of by Mr. G. Mrs. G., a perceptive woman, knew that she could not go on relying on her daughter for such assistance so she unsuccessfully sought help from the local literacy programs previously alluded to.

It was difficult for the writer to accept that a woman who learned to speak English and one other foreign language was totally illiterate. If she were literate in any language that is written in a Latinate alphabet, she should have been able to transfer her literacy skills from

one language to another (Galvan, 1979). However, she was not at all literate in her native language or in either of the two languages she acquired during her life. With respect to English, her illiteracy was verified in the manner described in the following paragraphs.

Testing

At first, an administration of the reading portion of a standardized adult basic education test (the ABLE) was attempted with no success at all; she simply could not deal with the test. An informal reading assessment was then tried as follows:

1. She was instructed to try to read from the Harris Graded Word List in which the learner is asked to read words aloud from a list of progressively more difficult columns of ten words per column until he or she encounters a column in which the words are, for the most part, unmanagable. While this informal test is of questionable reliability, it does give the examiner some idea of the skill with which a learner can "sound out" words in the language (sound-letter relationships). Mrs. G. could not even get through the first column which contains simple words of one syllable each.
2. Often it seems, a person who cannot read aloud sometimes has the ability to read silently and to comprehend. To learn if the subject had this ability, the writer used an informal reading inventory (IRI) containing eight passages for reading graded according to the Fry Readability Index (Fry, 1977). The learner is asked to read each passage silently and then to respond, orally if necessary, to questions that seek to evaluate his or her literal comprehension of the passage. Mrs. G., when

administered the IRI, comprehended nothing in the first of the graded passages.

She was then asked to read the alphabet aloud; she did this successfully. The examiner then gave her a series of letters to read aloud; it was the alphabet but out of sequence. She recognized fewer than half of the letters when presented with the out-of-sequence alphabet, indicating that she had memorized her "ABCs" but could do little of value with the letters.

Throughout this informal assessment, the writer observed that there were random words and letters that Mrs. G. recognized and manipulated, so she did give evidence of having some experience with the written language, but not at the truly symbolic level. She seemed more to react to signs rather than to symbols; it was, therefore, determined that for all practical purposes, Mrs. G. was an illiterate.

Before instruction could begin, however, there was one other matter that needed attention, and that was the matter of eye-movement. In interviewing Mrs. G., the researcher asked her to describe her work (she had a job as a packer for a local food producing firm). She explained that the finished food items came down a conveyor belt and she would pack them into larger shipping cartons. The conveyor belt moved in a left-to-right direction in relation to Mrs. G., so the researcher tentatively felt that she was reasonably comfortable with left-to-right eye movement. However, eye movement/word-shape exercises such as displayed in Figure 1 were given to the subject who performed quite well on them.

Insert Figure 1 about here

Eye movement, and eyesight seemed to pose no problems (eye movement exercises were continued for several weeks after instruction began just for the practice) so the tutorial began as described below.

The Program of Instruction

While it was recognized that Mrs. G. was illiterate, it was also recognized that she had done quite well for herself over the past several years in spite of her handicap. Her illiteracy was not a product of a lack of intelligence, but of a concatenation of unhappy accidents in her early life.

Assuming then that her intelligence was, at least, average; that her motivation was reasonably strong; that there were no pathological problems (dislexia, e.g.); and that her spoken English provided no barriers to learning to read, the writer planned a tutorial program of reading instruction that initially had the following objectives.

1. The learner would be able comfortably to handle sound-letter relationships so that she could pronounce from their written forms unfamiliar words, even nonsense words. The learner, more importantly, would be able orally to decode the printed forms of words in her present, spoken lexicon.
2. The learner would be able to recognize and pronounce extensive lists of "sight" words (he, to, for, with, etc.).
3. The learner would be able to recognize, and to restate stories deriving from her own experience translated into standard writing by the instructor.
4. The learner would be able, in time, to comprehend the literal meaning of connected writing at an elementary level.

There was a great deal of uncertainty as to how long it would take to overcome the problem of basic decoding, so no time limits were established.

The researcher had no idea of the effect of age on the literacy acquisition process, and could not rationally or responsibly project a time frame.

There were two major theoretical assumptions underlying the type of instruction that was to be offered to Mrs. G.:

1. ". . . reading is a psycholinguistic guessing game. It involves interaction between thought and language. Efficient reading does not result from precise perception and identification of all elements, but from skill in selecting the fewest most productive cues necessary to produce guesses which are right the first time." (Goodman, 1967).
2. The English alphabet is not as irregular with respect to its representation of spoken English as it is popularly thought. Indeed, if English spelling is viewed in terms of patterns of syllables, one would find that those spelling patterns map almost perfectly with the spoken language (Shuy, 1977). In otherwods, English is a "phonetic" language if viewed in larger units of patterns of letters rather than in single letters.

In addition to the theoretical assumptions, a practical one affected thinking on this project. Traditionally, reading teachers working with adults have tried to teach too much, standing thus in the way of learning. Most basic literacy texts contain much too much information--information which is often linguistically inaccurate. However, many adult education teachers, like their elementary counterparts, feel constrained to proceed through the text in a lock step, page-by-page format forcing the learner to assimilate data which are often useless to the reading process

(mnemonic devices, "phonics rules", e.g.). So rather than hold the subject to a rigid sequential program, the researcher would introduce reading for literal meaning at an advantageous time, and, if practicable, abandon instruction in "phonics."

Instruction was scheduled for weekly sessions of at least one hour's duration at the campus of the University of Nebraska-Lincoln.

Decoding Skills

The complete sequence of the exercises that led to the learning of sound-spelling relationships will not be presented here.[3] Rather a quick overview of what was done and what was accomplished will be followed by some observations on the affective aspects of the instruction.

Borrowing from Fries (1963), the researcher constructed a series of exercises of the sort represented in Figure 2. Reading down each column you will notice that with the exception of the first letter, the words are

Insert Figure 2 about here

all spelled the same, and, in effect, rhyme with each other. Reading across, only the vowel changes in each word. These complete words, these spelling patterns, will appear often as syllables in other words remaining, in large measure, as accurate, written representations of their spoken syllabic counterparts. Forty or so exercises of this type were developed, although only twenty-five were ever used. Each exercise emphasized a different set of spelling pattern configurations that, it was hoped, would be internalized by the learner by relating the patterns to her own oral language experience.

The approach to teaching this exercise was simple in the extreme. The instructor would expose one vertical column at a time and read aloud each word in the column having the learner follow with her eyes the words on the list and repeating them one at a time after the instructor. (Since the woman's English was accented, the instructor needed to be cognizant of certain idiolectal pronunciations which would be considered irregular if her non-English language background were ignored. The purpose of these exercises was spelling recognition, not pronunciation precision according to native American-English standards.)

Each vertical column was pursued in turn--several times if necessary--then each horizontal row until the instructor became comfortable with the learner's progress. Once this was attained, the instructor would randomly point out words from the exercise asking Mrs. G. to say them. If she were correct with most of her responses, a new exercise on a different pattern was introduced.

Three interesting phenomena emerged early on: two highly positive and one slightly negative. The positive phenomena had to do with the rapidity with which Mrs. G. seemed to grasp the content of the exercise and the good feelings of accomplishment she definitely experienced. After the first exercises, Mrs. G., rather than pronounce each pattern <u>after</u> the instructor, began to anticipate the pronunciation of the target syllables and would utter the pattern <u>before</u> the instructor. This pleased her enormously (and the instructor, too) for indeed she realized that she <u>was</u> reading something and this realization came within the first hour of actual reading instruction.

The negative manifestation came about probably as a result of the rote nature of the exercises[4] which, after three or so sessions, caused some fatigue (maybe even boredom on Mrs. G.'s part). It was then decided

to add to the instruction something that would be, perhaps, more meaningful to the learner than the relatively simple process of utterance cued by the printed syllable. However, the added activity, it was felt, should in no serious way detract from the main purpose of the early stage of instruction--decoding. The new activity should rather provide some relief for the learner, relief which would, in turn, allow for the development of supplemental exercises on other types of decoding problems.

The instructor then introduced into the program "Language Experience" (Stauffer, 1970) methodology. Mrs. G. was asked three questions concerning her job of work. Her responses were recorded verbatim in writing and then typed in standard form. The following session, after about thirty minutes of pattern exercises, her story was presented to her and it was used in the standard "Language Experience" fashion. She recognized that the selection was her creation even though it took some time and a good deal of prompting for her to understand the written form of her words. She was asked to repeat each sentence aloud after the instructor and familiar spelling patterns were pointed out to her. Also, from the "Language Experience" exercise, the instructor derived the beginnings of a list of "sight words" for memorization.[4]

It should be noted at this point that after the second week of instruction, a graduate student expressed interest in this project and volunteered to assist the researcher. The offer of assistance was enthusiastically accepted and the graduate student was assigned the tasks of recording her observations of the teaching/learning process and substituting for the researcher when needed (following his directions concerning instruction, of course). Mrs. G. did not appear to be at all uncomfortable with the observer. If fact, they have since become good friends.

Each week the experience story was expanded by asking further questions deriving from the original context and recording the responses in typewritten form. Sight words were extracted from the story and practiced, and the story and sight word drills were included along with the spelling pattern drill each week. Instruction continued in this general manner for eight weeks. That is, spelling patterns, experience story and sight words constituted all of the instruction. (Many of the lessons were put onto audio tape for practice at home, and while Mrs. G. was not as diligent as was desired, she did practice.)

On the ninth week after an abbreviated pattern exercise, the instructor, working purely on instinct, provided Mrs. G. with a list of novel sentences to read aloud. These sentences are displayed in Figure 3.

Insert Figure 3 about here

She read them--accurately. She was asked what each sentence meant and she responded accurately in all cases. It appeared that, at this point, a breakthrough had occurred with Mrs. G.; that she could read novel sentences and understand them without prior prompting.

It was then decided to administer the IRI again, and, reading silently, she was able to get through reading passages at the first two levels with no serious difficulty in comprehension, and a third level with some struggle and lack of comprehension of portions of the passage. This, to the observer, was very encouraging and it was decided to expand upon exercises in reading for literal meaning and to reduce spelling pattern drills proportionately. This pleased Mrs. G. for, indeed, she enjoyed reading even the simple selections chosen for her from several different ABE reading texts.

After four more weeks of spelling pattern and sight word drills accompanied by free reading-for-comprehension exercises, a major shift in the program was called for by the obvious progress made by Mrs. G.

Instruction in decoding skills was suspended and concentration of instruction upon literal comprehension of text was inaugurated. Commercial material was chosen for this component (Douzat et al., 1979) since Mrs. G. had demonstrated ability to decode novel sentences. The introductory material of this series was passed over and the reading of connected writing for literal meaning was begun in earnest.

The early experiences with the Dauzat material was so encouraging that the investigator felt that the administration of a standardized test of reading proficiency would be in order at this time. The reading and vocabularly sections of the ABLE (Level 1) Adult Basic Education Learning Examination 1967 were administered in February, 1980, after a total of 15 hours of direct instruction. The scores she achieved were:

	Raw Score	Grade Equivalent
Vocabulary	37	4.7
Reading	42	4.0

The scores indicated that Mrs. G.'s recognition vocabularly was somewhat higher than a grade four equivalent while her reading comprehension corresponded to a grade four level. In short, she was no longer illiterate. She was not fully functional in reading, but she had broken through the first major barrier.

Observations

The progress that Mrs. G. made in such a short time seems to have lead to several positive results beyond the acquisition of fundamental reading skill.

First, there has been a palpable change in Mrs. G. herself. She is more confident in herself, more outgoing and more comfortable with other people who are literate. This writer's observation about these affective changes are certainly colored by his desire to see such change. However, Mrs. G.'s family, the graduate student observer, and casual acquaintances such as colleagues and office personnel in this academic department have all corroborated the observations.

Another important perception of the writer is worth noting again. The fatigue that Mrs. G. frequently experienced and which affected the success of given lessons could very well have been function of her age in combination with the physical nature of work. Having done many tutorials with younger people over the years, the writer has never observed fatigue as severe or as sudden as has occurred with Mrs. G. Whenever severe tiredness seemed to overcome the learner's motivation during a session, instruction was suspended and picked up the following week approximately from the point of suspension. Interestingly there was never a problem in continuing from the suspension point. It is almost as if everything she encountered in instruction was deposited in her long-term memory and made available for immediate recall when needed.

Summary and Conclusions

While no imperative conclusions are possible on the basis of this case study, it is possible, even desirable perhaps, to infer in two areas or so.

First, in the case of Mrs. G., Goodman's model seems accurate in that she broke through the sound letter relationship barrier to reading for literal comprehension without having been instructed in all of the possible spelling patterns of English. Moreover, it appeared with Mrs. G.

that her age, dispite occasional problems with fatigue, was not an impediment to literacy acquisition. Therefore, Lumsden's first concern can possibly be answered by saying that specific materials need not be developed for older adults so long as the materials used for instruction are linguistically accurate and provide for the learner immediate printed access to that which is already known in spoken form.

While fatigue did play a part in the day-to-day instruction of the subject, it seemed not to have an affect on learning if the long view is taken. Possibly because almost everything in the earliest stages of learning was directed toward the learner's experience with the language, beginning with small bits and moving toward larger syntactic units, her needs were met and her interest maintained. Hence, Lumsden's second question is partially addressed.

Whether or not the instructional procedures employed in this study can be validated beyond this case remains to be seen. However, in this case the learner did learn, it is concluded, as a direct result of the procedures used. Moreover, it is interesting to point out that the theoretical base from which the procedures were derived was supported throughout the study, so, perhaps it is possible to generalize cautiously from N = 1.

That the process of acquiring literacy has helped Mrs. G. to experience a rewarding renewal, is to this writer and his corroboraters, the one conclusion that can be made and generalized from. She is no longer an illiterate, she feels good about it, and her newly acquired skill has added an important dimension to her life and the change that has occurred with Mrs. G. could happen to anyone.

Epilogue

The work with Mrs. G. continues and she progresses well. It may never come to pass, but she and her instructor have agreed to try to prepare for the GED examination.

Footnotes

[1]The young woman saw the "Department of Adult and Continuing Education" sign on the office door and risked asking if there were anyone there who would be able to help her mother with an educational problem.

[2]Certain details are omitted or slightly altered to assure the subject's anonymity.

[3]Anyone interested in these materials can contact the author at the University of Nebraska-Lincoln, Lincoln, NE 68588.

[4]The exercises on spelling patterns are not considered "memorization exercises" per se although memory (short and long term) is considered. Rather, these are inductive types of drills from which the learner is expected to generalize internally patterns of spelling.

Figure 1

1.	ashore	fruit	shore	ashes	aside	ashore
2.	capper	capes	near	capper	capital	capture
3.	cruel	cruel	crude	cruise	glowing	fuel
4.	employ	employer	employ	capable	enpower	employee
6.	made	madly	mademoiselle	exact	madam	made
9.	ugiy	win	fly	urge	glee	ugly
12.	cube	cub	cubic	high	cube	tube
15	virtue	vivid	virtue	eraser	vision	violins
16.	unceasing	uncertain	mechanical	increasing	cease	unceasing

Figure 2

	a	e	i	o	u
b	ban	ben	bin	bon	bun
c	can			con	
d	dan	den	din		dun
f	fan	fen	fin		fun
g			gin		
h		hen		hon	
j					
k		ken	kin		
l				lon	
m	man	men	min		
n	Nan			non	nun
p	pan	pen	pin		pun
q					
r	ran			Ron	run
s			sin		sun
t	tan	ten	tin		
v	van		vin		
w			win		
x					
y					
z					

Figure 3

1. Dick is sick.
2. Mick is a hick.*
3. There is a tick in the rick.*
4. Dan can see the man.
5. His gin is in the bin.*
6. This pen is for a hen.
7. Ron ran.
8. The bun is in the bin.
9. Nan is a nun.
10. Ken is my kin.

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*The subject did have questions about the meaning of these sentences.

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